MANGALORE UNIVERSITY

PERSPECTIVES OF STAKEHOLDERS ON FIRST AID PROGRAMME IN GRADUATE CURRICULUM IN KARNATAKA.

Ph.D SYNOPSIS

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INTRODUCTION

First Aid Services or First Aid Preparedness is an act of competence and a pertinent life skill that is implemented at the time of an emergency and is the need of the hour. In a rapidly developing economy like India with a population of 1.3 billion; of which there are more than 30 million students are into graduate education who could be constantly trained into life's emergency responses as a skill - into a disaster, an epidemic or a pandemic; with an aim to harness early and effective pre-hospital care, thereby increasing the survival rates of the victims. In times of an emergency, the first aid given to these patients in a pre-hospital care scenario emphasises of resuscitation and stabilisation till the victims are given definitive care through the trained paramedics, is vital and can help prevent deaths.

According to the World Health Organisation (WHO), in the absence of established emergency medical services, bystanders can play a game changing role in saving lives. They can call for help, provide first-aid to the injured and even rush them to the nearest hospital, if an ambulance does not arrive in time.

Non Communicable diseases (NCD's) such as heart disease, stroke, cancer, chronic respiratory diseases, are on a rapid rise and the leading cause of mortality in the world. Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally. Each year, 15 million people die from a NCD's between the ages of 30 and 69 years; over 85% of these "premature" deaths occur in low- and middle-income countries. These diseases are driven by forces that include rapid unplanned urbanisation, globalisation of unhealthy lifestyles, physical inactivity and population ageing. (WHO Global Health Observatory - https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases). According to a study published in the Lancet, projections indicate that by

2030 NCDs will account for almost 75% of all deaths in India and the years of life lost due to coronary heart disease will be greater in that country than in China, the Russian Federation and the United States of America combined.

Cardiovascular diseases account for most NCD deaths or 17.9 million people annually. The burden continues to grow; with the number of people, families and thus communities being affected. The socio-economic impact is huge too as NCDs threaten progress towards the 2030 Agenda for Sustainable Development, which includes a target of reducing premature deaths from NCDs by one-third by 2030. The government has helped to create a public health infrastructure with operational guidelines to ensure prevention of these issues; but the pre hospital emergency set up for sudden risk in NCD patients is lacking and this is critical.

The incidences of Sudden Cardiac Death due to NCD's and Road Traffic Accidents are increasing every single day; and understanding the golden hour concept with the basics of Emergency Assistance / Preparedness with skills of CPR (cardiopulmonary resuscitation) isn't known by many or even by the community at large nor even the people who safeguard our interests in the environments we live in. The golden hour, also known as golden time, is the period of time following a traumatic injury during which there is the highest likelihood that prompt medical and surgical treatment will prevent death. The underlying tenet is that an injured patient has 60 minutes from the time of injury to receive definitive care, after which morbidity and mortality increase significantly.

The health sector in India is largely underperforming as the skilled healthcare workforce in India have statistics that are abysmal. It does not meet the minimum threshold skilled workers per 10,000 population recommended by the World Health Organisation (WHO). We are still dismally low at 1:1457 - Doctor : Patient ratio.

(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6259525/). On the same note for want of pre-hospital care in times of emergency, any trained first aid provider can make a massive impact and help increase the chances of survival.

The admissions into Higher Education in the disciplines that are non healthcare oriented viz; Arts, Social Sciences, Engineering and Technology, Commerce etc under 700 plus degree granting institutions is approximately 3,35,47,237. - (Educational Statistics 2018 by Ministry of Human Resource and Development). This distinct genre and massive size of students are an asset in the environments they get educated in and the communities they live in. During their term of learning they are hard skilled trained into the subjects the curriculum is structured to be; but more so over the soft skills into communication, leadership and first aid programme can help create a powerful and an immense difference into their existence.

There is an urgent need for policy makers from the education sector of the higher education undergraduate institutions to help understand the pre-hospital first aid scenario and to formulate a plan to help create a layer of individuals or Community Rescuers, especially using the college student community; to be trained on the principles of emergency preparedness in times of a disaster, accident or pandemic; thus creating a visible difference between a dying and surviving a patient in an emergency, These qualified and well-informed college graduates will be a life imparting force, in the Indian ecosystem.

Viewing the present state of affairs; with evidence of rise in non communicable diseases (NCD's) spreading through the communities at large and across the age spectrum, and with the lack of community awareness with respect to emergency preparedness; there lies a huge lacuna. The qualified graduates in the educational

sector aren't aware of the basics of Emergency Assistance and the steps that have to be carried out in times of an emergency.

Creating a Community Rescuer through the students of today's higher education institutions is truly an inter-disciplinary topic, drawing interest and discussion from the students, higher education institution owners, healthcare delivering institutions, medical bodies, NGO's and caregiver foundations and also the intervention of the education policy makers. These representatives from diverse fields will be coming together, collaborating, and cooperating and will help in determining the future of the Indian diaspora - by making a sincere attempt to improve the competency and capability into Emergency Healthcare Assistance services of the graduate student community.

It is therefore not possible to consistently identify one coherent perspective or vertical or stakeholder into creating a community rescuer through an educated graduate student; but by the union, alliance and consociation of all the stakeholders (viz. health and education sector). A medically trained personnel with the perspective of a social scientist on co-creating an First Aid Responder may actually help prompt more non-conflicting civility in the environments they flourish in. Medical Science and Social Science are ever evolving and with their blend and evidence based merger - it can help create policy decisions that can make a sea of change in the world today; with the right political will.

Incidence and Prevalence of Out of Hospital / Pre-Hospital Emergency and Deaths:

There are some startling statistics available on a global forum on the number of people who die every year, in a pre hospital scenario. The number of people who die each year from SCA is roughly equivalent to the number who die from Alzheimer's disease, assault with firearms, breast cancer, cervical cancer, colorectal cancer, diabetes, HIV, house fires, motor vehicle accidents, prostate cancer and suicides combined.

Sudden cardiac arrest (SCA) is a condition in which the heart suddenly and unexpectedly stops beating. If this happens, blood stops flowing to the brain and other vital organs. SCA usually causes death if it's not treated within minutes. SCA is not the same as a heart attack. A heart attack occurs if blood flow to part of the heart muscle is blocked. During a heart attack, the heart usually doesn't suddenly stop beating. SCA, however, may happen after or during recovery from a heart attack. People who have heart disease are at higher risk for SCA. However, SCA can happen in people who appear healthy and have no known heart disease or other risk factors for SCA. The outlook is that most people who have SCA die from it - often within minutes. Rapid treatment of SCA with Cardio Pulmonary Resuscitation (CPR) and a defibrillator can be lifesaving. A defibrillator is a device that sends an electric shock to the heart to try to restore its normal rhythm. Automated External Defibrillators (AED's) can be used by bystanders to save the lives of people who are having SCA. With every minute that passes, the chances of surviving SCA drop rapidly. In India, Emergency Medical Technicians and other first responders usually are trained and equipped to use an Automated External Defibrillator in a SCA scenario.The sooner you call for help or the sooner lifesaving treatment - CPR and Automated External Defibrillator is given; the chances of survival of the

person is higher. Automated External Defibrillator's are portable devices often are found in public places, such as shopping malls, golf courses, airports, universities, airplanes, cruise ships, casinos, convention centres, hotels, sports venues and schools.

Sudden cardiac death is the largest cause of natural death in the United States, causing about 325,000 adult deaths in the United States each year. Sudden cardiac death is responsible for half of all heart disease deaths. Sudden cardiac death occurs most frequently in adults in their mid-30s to mid-40s, and affects men twice as often as it does women. This condition is rare in children, affecting only 1 to 2 per 100,000 children each year.

With due respect, on a historical perspective, in 1891, Friedrich Maass performed the first chest compressions on a human being. 80 years later, the first mass citizen training in cardiopulmonary resuscitation (CPR) was held in Seattle; over 100,000 members of the public were taught CPR.

The Legal Dimension - Good Samaritan Law
(https://en.wikipedia.org/wiki/Good_Samaritan_Law_(India))

India's Good Samaritan Law was passed as a Bill by the Supreme Court of India on March 30, 2016. This gave the "Force of Law" to the guidelines for the protection of Good Samaritans and it was then issued by the Ministry of Road Transport and Highways, GO's by the State Governments and also in the draft of Motor Vehicle Act 2019. The important points in the SOP of the Good Samaritan Law are:

- Police should not involve the Good Samaritans for investigation.

- Hospitals should not refuse to treat the accident victims and should not charge for First Aid.
- Good Samaritans should be protected from civil and criminal liability.
- Good Samaritans need not reveal their identity.
- Good Samaritans can choose to be an eye witness, and should not be compelled otherwise.

Karnataka has now moved a step closer to a good Samaritan law with President Ram Nath Kovind giving assent to the Good Samaritan and Medical Professional (Protection and Regulation during Emergency Situations) Bill, 2016. According to the new law, the Karnataka government will extend financial assistance to those who help accident victims. This means that they will not have to make repeated attendances in courts and police stations.
This would also mean that the good Samaritans can leave immediately after ensuring that the victim is in the safe hands of doctors and hospital authorities. Further, in case of mandatory attendance at courts and police stations, a Good Samaritan Fund will be created which will take care of all expenses.

Considering Karnataka is one of the top 5 states in road crash deaths in India with over 11,000 people being killed in 2016 alone, this legislation can potentially save over 5000 lives annually. The World Health Organisation too, states that 50% of the victims die in the first 15 minutes due to serious cardiovascular or nervous system injuries and the rest can be saved through by providing basic life support during the 'Golden Hour', which is the first hour after an injury is inflicted.

(https://www.news18.com/news/india/karnataka-has-shown-the-way-with-good-samaritan-bill-its-time-rest-of-india-joins-in-1896757.html)

https://savelifefoundation.org/gsl-microsite/

REVIEW OF LITERATURE

The purpose of reviewing literature for this study is to present an extant of literature and to obtain relevant information that is available about the research topic. The literature review examines the perspectives of the different stakeholders for implementing First Aid Programme in the higher education curriculum. It surveys the out of hospital tragic human episodes that causes death with the concepts, scope, nature, elements and the advantage of creating a Community Rescuer. It also scrutinises the different determinants and scopes that were previously attempted or established to influence on the school graduates and the essence of an Emergency Healthcare Assistance program in India different parts of the globe. In this section of literature topics and sub topics on the issues of state building and others related with the topic will be included. The review is focused on gaining an understanding of the education policy and the regulatory criteria and legislations that were involved; thus playing a potential role in determining the knowledge (soft skill) level of that student. The review includes literature from research articles, reports, government documents and book chapters, as well as news papers and magazine articles relevant to the research topic.

Bottiger (2015) "Training children in cardiopulmonary resuscitation worldwide"

This article from The Lancet, examines facts and figures on OHCA and the outcomes of an untrained bystander. A startling number of 2000 people deaths every single day around USA and Europe is witnessed, which could potentially survive if the lay resuscitate these individuals. Perhaps more than 100 000 deaths per year could be prevented if members of the public, beginning with school children, were educated about how to do CPR. In countries where educating school children in

CPR is mandatory, lay resuscitation is done in 60–75% of cases, and survival after out-of-hospital cardiac arrest can be tripled.

Velasco D (2019) “The Lay-Rescuer’s CPR Guide”

This book aims to increase the population of potential rescuers of victims of cardiac arrest at home or in public places. This guide teaches a lay person how to determine if someone is indeed in cardiac arrest, perform high-quality CPR, and use an Automated External Defibrillator. It uses the American Heart Association (AHA) framework to guide instruction and ensure that the didactics are accurate and up to date. This guide provides selected links to accurate YouTube videos and displays images for demonstration purposes. Towards the end of the book, the author tests the lay-rescuer through text-based scenarios to improve decision-making skills and provide interactive learning.

Cameron P (2014) “Textbook of Adult Emergency Medicine”

In this book the premise is set that a lay or an untrained rescuer shouldn’t waste any time in case of a OHCA. The rescuer should activate the EMS system and start CPR immediately; with an emphasis on high and quality CPR.

Field J (2009) “The Textbook of Emergency Cardiovascular Care and CPR”

There is a lot of emphasis and stress around the evidence of supporting links in the chain of survival by the lay rescuer who can magnify the chance of survival of

the OHCA victim. Many communities could begin to improve survival rates by teaching and encouraging their citizen to do more CPR.
Education on CPR has shown to improve the quality of CPR on patients and also survival chances.

Song J (2018) “The effect of bystander CPR on the OHCA: a systematic review and meta-analysis.”

Song and his team came to a conclusion that Bystander CPR (BCPR) increases the survival of OHCAs, and it also help OHCA’s whose initial rhythm is shockable. That is to say BCPR is also helpful when emergency department response time is short. Therefore global priority should be given to increasing the incidence of BCPR by evidence-based best practice.
Wilks J (2017) “Skills for life: First aid and cardiopulmonary resuscitation in schools.”

Age-appropriate first aid and CPR instruction should be integrated into the school curriculum beginning in the primary years and developed/refreshed annually. Topics covered should include calling for help, bleeding, choking, burns, unconsciousness and resuscitation – all within the broader context of being confident and willing to help others. With the right training and support, schoolteachers can effectively deliver first aid instruction to their students. Future research should concentrate on gaps in evidence-based practice, especially measurements to demonstrate the effectiveness of first aid training, in order to advance the case for mandatory first aid education in schools.

Swor R (2008) “CPR Training and CPR Performance: Do CPR-trained Bystanders Perform CPR?”

This interesting study claims that the CPR was executed by the bystanders who were trained and not shy to do so. CPR provision was more common in CPR-trained bystanders with more than a high-school education.

Legislating CPR in schools in USA (https://www.yourethecure.org/cpr_in_schools_update)

From Nevada to Michigan and in dozens of states across the country, lives are being saved by high school students trained in CPR at school. 38 states and Washington, DC have passed state laws that will assure all students are trained in life-saving CPR before they graduate from high school.

“We must advocate for CPR-Automated External Defibrillator programs in all schools across the United States. Every student should learn CPR as a life skill prior to graduation. There is absolutely no doubt that teaching CPR to youth in schools can and will save the lives of both adults and children.” –Stuart Berger, MD

Hughes T ( ) “Adult Emergency Medicine at a Glance”

Pre-Hospital Medicine is a science in itself. Practising medicine in an out of hospital environment is challenging. With the efforts of trained bystanders or lay res-

cuers, efforts made to find cooperation and relief in a structured approach is more encouraging.

Wyatt J (2012) "Oxford Handbook of Emergency Medicine"

There is one critical question that is captured in the history of the trauma or SCA. Was there any bystander CPR? Evidence suggests that with the early initiation of CPR by the bystanders the risk of mortality is significantly lower.

Nutbeam T (2013) "ABC of Prehospital Emergency Medicine"

The success of pre hospital resuscitation is pivotal and vital with the early initiation of bystander CPR. The survival chances are better with much lesser mortality rates.

Skinner D (1997) "Cambridge Textbook of Accident and Emergency Medicine"

The patients admitted into various hospitals with a pre hospital SCA and bystander CPR versus late CPR - The BCPR victims had a much higher rate of survival and were discharged alive. These patients who were witnessed arrests with proactive lay rescuers survived and weren't dead.

Dr Bruce Wilkoff blog on Role of Bystander CPR

Dr Bruce Wilkoff, Director of Cardiac Pacing and Tachyarrhythmia Devices, Cleveland Clinic says “Emergency Treatment includes CPR to keep oxygen in the lungs and brain and restoring the heart rhythm by shocking It with an Automated External Defibrillator (Automated External Defibrillator).

Before the adoption of CPR in communities, the survival following out-of-hospital cardiac arrest approximated less than 5%. One estimate suggests that the number needed to treat for one person to survive out-of-hospital cardiac arrest due to the initiation of bystander CPR is between 24 and 36. However, only about 1 in 3 witnessed out-of-hospital cardiac arrests involve early bystander CPR initiation. Panic and discomfort of the bystander are in fact the most common reasons why CPR is not initiated during a witnessed cardiac arrest.

A bystander trained in CPR is the strongest predictor of a victim receiving CPR stronger than a public location of the cardiac arrest, a bystander-witnessed event, and the bystander’s overall educational level. Although not proven, it is likely that bystanders trained in CPR are more likely to act and act competently, for example, with the appropriate depth of chest compressions and with less hesitation.

Communities which institute public CPR education, use of Automated External Defibrillators, and rapid activation of emergency medical services have dramatically increased survival rates from sudden cardiac arrest. Unfortunately, because the brain is so sensitive to the lack of oxygen and blood flow, unless treatment occurs within four to six minutes, there is a high risk of some permanent brain damage.

CPR is our most lifesaving treatment for cardiac arrest, but most people don't receive it," said Dr. Ben Bobrow, medical director of the Arizona Department of Health Services' Bureau of EMS and Trauma System in Phoenix. "What we know is that communities with the highest cardiac arrest survival rates also have the highest (bystander) CPR rates." Factors that increase the likelihood of bystander intervention.

- **Size of the community in which the bystander lives or grew up:** Individuals who grew up in rural areas are more likely to help than individuals from urban areas. People from non-metropolitan areas are more likely to help than their counterparts.
- **Presence at the time of the event:** Bystanders who witness the emergency are more likely to help than those who arrive after the emergency has occurred.
- **Previous emergency training and positions of responsibility:** People with CPR training or other emergency training and people with positions of responsibility in their organisations are more likely to help in SCA.
- **Availability of Automated External Defibrillator:** When Automated External Defibrillators (automated external defibrillators) are available, bystanders are more likely to initiate CPR.

CPR Training in Schools - USA

Overall, 38 states plus Washington, D.C., have passed laws or adopted curriculum requiring hands-on, guidelines-based CPR Training for students to graduate high school. Kansas was the latest – and only – state to enact such legislation in 2017 to take effect this school year. Arizona's CPR in schools law, passed in 2016, takes effect in the 2019-2020 school year for the state's 60,000 graduating students.

*According to the American Heart Association, 22 states require CPR training fo-graduation.*There's "no single magic bullet" to raise CPR rates, he said, but training young people is a great place to start because they can disseminate CPR training to others, including their families. The number of U.S. states mandating cardiopulmonary resuscitation (CPR) training as a requirement for graduation from high school is rapidly increasing. Such requisite CPR training in high school now involves 21 states and more than one million high school students annually. Although students may opt out, parental consent is required to do so, compelling the majority of high school students to learn the basic techniques of CPR. We believe this widespread implementation of CPR training has many benefits to high school students and the broader U.S. public. High school students are well-positioned to improve rates of bystander CPR initiation in the United States, and their engagement could reduce deep disparities in regional rates of survival of out-of-hospital cardiac arrest through early initiation of bystander CPR.

The American Heart Association is working to pass state laws that will assure all students are trained in life-saving CPR before they graduate from high school. Thanks to our efforts, more than 2 million students across 39 states and Washington, DC become trained lifesavers every year!(https://www.youtube.com/watch?v=sv7WEHlMc8c). The amazing campaigns like "Be CPR Smart" and "You're the CURE" by the AHA have helped work thru the volunteers and the legislations to ensure that these students who are a valuable force can actually save lives with a sense of leadership and by instilling into them facts and testimonials.

Legislations CPR Training in Schools - Australia

Age-appropriate first aid and CPR instruction should be integrated into the school curriculum beginning in the primary years and developed/refreshed annually. Topics covered should include calling for help, bleeding, choking, burns, unconsciousness and resuscitation – all within the broader context of being confident and willing to help others. With the right training and support, schoolteachers can effectively deliver first aid instruction to their students. Future research should concentrate on gaps in evidence-based practice, especially measurements to demonstrate the effectiveness of first aid training, in order to advance the case for mandatory first aid education in schools.

The European Resuscitation Council Perspective:

Europe approximately 400,000 people suffer an out-of-hospital sudden cardiac arrest every year, with a survival rate of less than 10%. The survival of many apparently healthy victims depends on cardiopulmonary resuscitation (CPR) administered by bystanders and early defibrillation, and whereas an intervention within 3-4 minutes may increase the chance of survival to more than 50%.

The European Parliament in participation with The European Resuscitation Council (ERC) has announced a declaration in 2012, calling onto the Commission and its member states to take proactive steps into bystander CPR. Thus has formed, European Cardiac Arrest Awareness Week and World Restart a Heart Day (16th October). This declaration calls on the Commission and the Council to encourage

and facilitate CPR and Defibrillation by non-medical persons, by educating the public at large. (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52012XP0266andfrom=EN)

The Indian Perspective

A set of National School Safety Guidelines, School Safety Policy 2016 has been attempted by National Disaster Management Authority, where the training of First Aid and CPR has been mentioned; where the Ministry of Human Resource and Development, Department of School Education and Literacy has asked the school to execute the same.

The schools and the non-healthcare higher education institutions have to create a space in their education ecosystem to fit the Emergency Healthcare Assistance program into their academic curriculum, instilling the right perspectives to co-create a Community Rescuer - a potential movable asset. Garnering a high level of curiosity with instilling appropriate skills and with the best training, we can help make the communities safer and more productive. There would be constraints of limited infrastructure, cultural issues, un-availability of trained personnel, shortage of healthcare workers, time and economic issues involved in the process; but with the political will and by the state and central legislation's and by partnering with the healthcare organisations thru out the Indian diaspora, a change can be brought about. Recognition of such institutes also matters as these citizen of India will thus create a change that can't be touched but only seen or felt - by rescuing a LIFE.

To realise this Community Participation, Inter-sectoral Coordination and Private Public Partnerships are mandated

National Health Policy 2017

Emergency Care and Disaster Preparedness: Better response to disasters, both natural and manmade, requires a dispersed and effective capacity for emergency management. It requires an army of community members trained as first responder for accidents and disasters. *It also requires regular strengthening of their capacities in close collaboration with the local self-government and community based organisations.* The policy supports development of earthquake and cyclone resistant health infrastructure in vulnerable geographies. It also supports development of mass casualty management protocols for Community Health Centre (CHC) and higher facilities and emergency response protocols at all levels. To respond to disasters and emergencies, the public healthcare system needs to be adequately skilled and equipped at defined levels, so as to respond effectively during emergencies.

OBJECTIVES

- To analyse the existing policy documents and literature on emergency assistance services among college graduates in India and South East Asia.

- To understand the interest of the qualifying graduates on emergency assistance and first aid delivery services; that if given the opportunity, would they be able to do this activity and want to be labelled as community rescuers.

- To understand the knowledge of the Higher Education Providers and assess if this activity would help create a sense of well-being in the professional environments they live in.

- To understand if the healthcare institutions and healthcare regulatory bodies would help in co-creating a layer of community rescuers through the college graduate community.

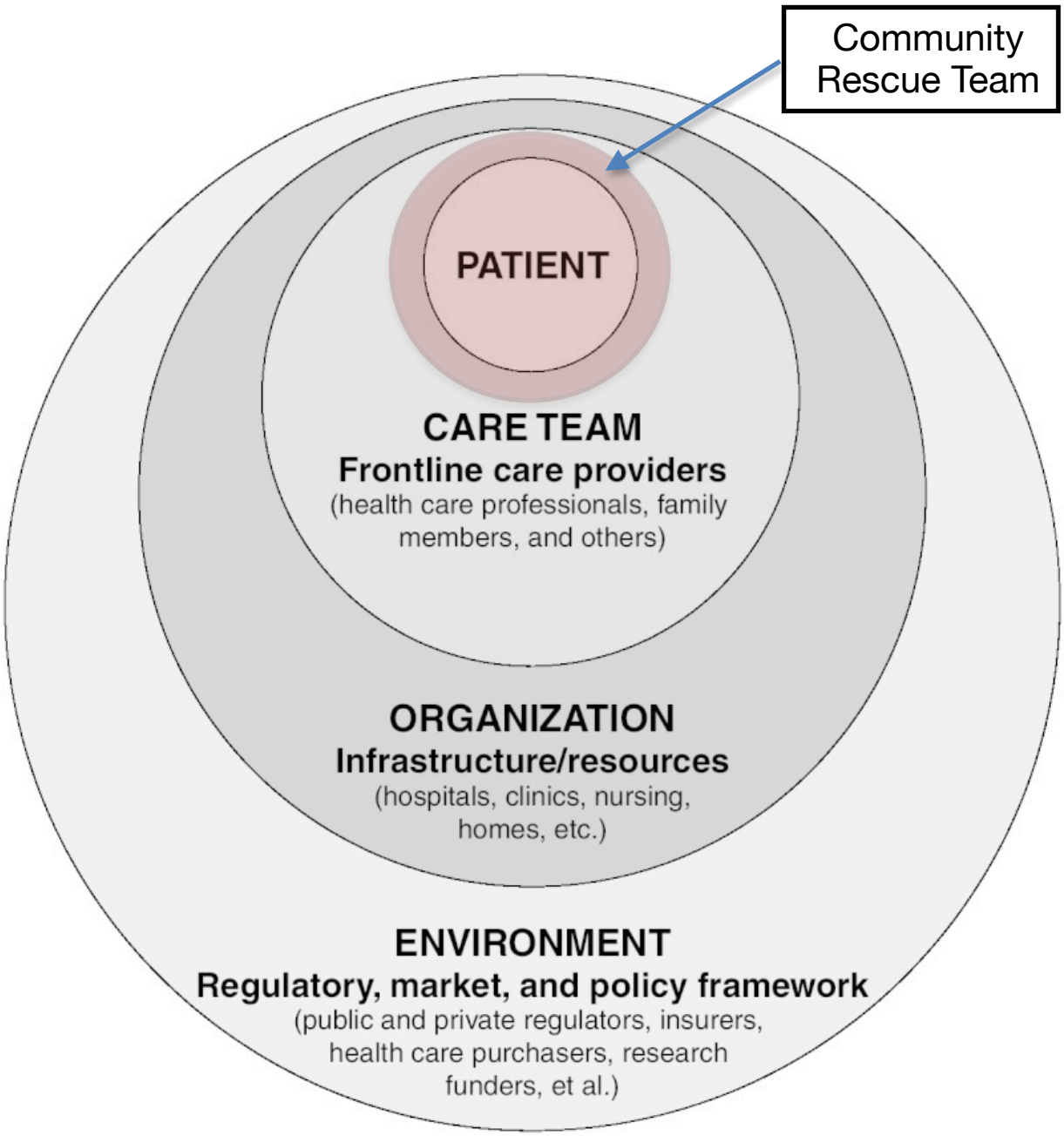
- To assess the view of the Education Policy Makers in introducing a new healthcare emergency awareness system in the curriculum; in line with the basic goal of the society.

SIGNIFICANCE OF THE STUDY

India should have or rather co-create a body of graduates who are not only qualified but also informed about the need of having the skills for Emergency Healthcare Assistance; thus creating an appropriate layer of like minded citizen for emergency preparedness in the communities we live in at large. This will help create a stark difference between dying and surviving; in an emergency.

This can begin to help intelligently design a trauma care system that begins to address the needs of each patient, at the time of an emergency. which can be dedicated public health intervention by incorporating high quality training, appropriate learning facilities and program structure and policy to ensure that every graduate that passes has to be trained for a set number of hours in imparting emergency healthcare assistance, thereby attracting young and talented multi-disciplinary professionals committed to civility, prevention of death and health promotion. In addition, rewarding good civilian attitudes and offering continuing professional development wherever necessary, can be achieved thru inter-sectoral coordination and Public Private Partnerships.

A strong and a proactive policy level change, that makes learning and helping fun in the educational ecosystem can bring about a well planned and a striking public health intervention. We shall then have quality and qualified informed graduates; a layer in the society that is fast and active and flexible; making the societies we live in safer, better and more humane.



In the four level healthcare system, a 5th layer is introduced in the community around the patients - as a Community Rescuer Team trained on Emergency Healthcare Assistance Program for out of hospital emergency assistance i.e. before the formal health caregivers arrive to the spot. This soft skill value can only be felt when these lives get saved. These graduates will be the differentiating factor in the environments we live in. Their role is crucial in times of an emergency health crisis or natural disaster.

RESEARCH METHODOLOGY

- STUDY DESIGN : MIXED METHOD

The research will use a mixed-method approach that involves the collection, analyses, and mixing of quantitative and qualitative data in a single study. The approach deems appropriate because, when used in combination, qualitative and quantitative methods complement each other; they also provide a more comprehensive understanding of the research problem, and generate detailed evidence (Greene, Caracelli, & Graham, 1989; Tashakkori & Teddlie, 1998). Mixed methods research is a multi-method research which is either solely multiple qualitative approaches or solely multiple quantitative approaches, which are combined; for the broad purposes of breadth and depth of understanding and corroboration. Additionally, the method answers a broader and more complex range of research questions, and provides stronger evidence for a conclusion through the convergence and corroboration of the findings

- TOOLS OF DATA COLLECTION

Data collection tools refer to the devices/instruments used to collect data. The qualitative data collection tools are In-depth interviews, Online forums, Groups, Web Survey Chat and Online communities. The quantitative data collection tools are Online, Face to face, Phone and mail.

For this study purpose, we'll be incorporating the following tools for data collection:

- **Questionnaire:** will be used as data collection tool from students.
- **Interview Guide:** will be used as a data collection tool from higher education providers, healthcare provider agencies or institutions and education policy makers

- TECHNIQUES OF DATA COLLECTION

Any research is good as the data that drives it, so choosing the right technique of data collection can make all the difference.

- **Surveys:** with Questionnaires gives the researchers an opportunity to carefully structure and formulate the data collection plan with precision.
- **Interview:** help the researchers uncover rich, deep insight and learn information that they may have missed otherwise. The physical presence of a persistent, well-trained interviewer can significantly improve the response rate.

- PARTICIPANT DETAILS:
  - Students (from non healthcare genres : Humanities, Life sciences, Management, Engineering)
  - Higher Education Providers: College owners, Academic heads,
  - Health Care Providers: Medical Directors of Institutions, Indian Medical Association, Indian red Cross, Association of Medical Consultants etc
  - Education policy Makers eg: State Level, UGC, CBSE, NAAC etc

LIMITATIONS OF THE STUDY

As we go through the existing review of literature, not much work is emphasised as making this process a module in the study pattern of a graduate in their higher education curriculum. The aspirations of the students into bystander CPR and other first aid techniques hasn't been checked or rather measured to ensure their training level and aptitude. The need for Private Public Partnership models have to be explored and thus inter-sectoral coordination. The need for community participation into emergency management has been emphasised in government documents too, but the status of actual implementation has to be verified, as skills like these is only going to save lives. In the next few years, with active surveillance, one can determine how many deaths could have been prevented by these simple skills which are crucial for ones moral and emotional quotient. Further, the inclination of the different healthcare institutions hasn't been explored to experience their keenness into training the layman, and thus create a layer in the community which is just going to strengthen the system considerably.

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Chapter III

1. The new education policy.

2. Background of First Aid Programme in colleges in India.
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Chapter IV

Quantitative Results

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2. Factors in India
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Suggestions
Recommendations
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ABBREVIATIONS

No	Abbreviation	Full Form
1	SCA	Sudden Cardiac Arrest
2	CPR	Cardio Pulmonary Resuscitation
3	AED	Automated External Defibrillator
4	AHA	American Heart Association
5	EMS	Emergency Management System
6	BCPR	Bystander Cardio Pulmonary Resuscitation
7	CHC	Community Health Centres
8	PPP	Public Private Partnership
9	NCD	Non Communicable Diseases
10	WHO	World Health Organisation
11	OHCA	Out of Hospital Cardiac Arrest
12	SOP	Standard Operating Procedure
13	GO	Government Order

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